

## DATA ITEM DESCRIPTION

**Title:** Mechanical Worst Case Analysis Report of Dimensions and Tolerances

**Number:** DI-QCIC-80890A

**Approval Date:** 21 NOV 2006

**AMSC Number:** 7655

**Limitation:** N/A

**DTIC Applicable:** No

**GIDEP Applicable:** No

**Office of Primary Responsibility:** NS/I5223

**Applicable Forms:** N/A

### Use/relationship:

This report documents a mechanical worst case tolerance analysis performed on parts, subassemblies, assemblies and equipment.

This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task equipment for this data included in the contract.

The documentation required by this DID is used to support the configuration end item product interchangeability requirements in the contract.

This DID is applicable whenever a contract requires mechanical designs with tolerance features.

This DID supercedes DI-QCIC-80890.

### Requirements:

1. Reference documents. None.

2. Format:

The report shall be in contractor's format and shall be no larger than 8 ½ by 11".

3. Content:

The report shall contain the following:

3.1. Title page. The first page of the report shall be a title page and shall contain the following about the applicable part, subassembly, assembly or equipment analyzed:

- a. Name
- b. Serial number
- c. Date of analysis
- d. Contract No.

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- e. Preparer of analysis
- f. Checker of analysis

3.2. Table of contents. The second page of the report shall be a table of contents.

3.3. Body of report. The body of the report shall include the following:

3.3.1. Summary. A summary of the analysis, highlighting the potential problem areas.

3.3.2. Introduction. Introduction information shall include the following:

- a. Title of each analysis performed
- b. Description of each analysis performed, or reference to the appropriate Government document
- c. Identification of the applicable parts, subassemblies, assemblies of equipment analyzed.
- d. Requirements to be met
- e. Reason for performing analysis

3.3.3. Data base. The data base shall include the following:

- a. A list of all drawings/part list
- b. Any reference documents
- c. All form tolerances
- d. Justification for the use of any tolerances

3.3.4. Analysis. Analysis information shall contain the following:

- a. Statement identifying the parts, subassembly, assembly of equipment being analyzed.
- b. Verification that a worse cast tolerance analysis allows no excessive interferences, clearances, or excursions to exist that would cause failure.
- c. Verification that the part, subassembly, assembly or equipment performs properly under all applicable environmental conditions.
- d. A tolerance distribution for economical processing of the part, subassembly, assembly or equipment.
- e. Applicable areas of engineering drawings or sketches to assist in the understanding of the analysis
- f. All calculations relevant to the analysis
- g. Any problems of potential problems with the part, subassembly, assembly or equipment.

3.3.5. Conclusion. The conclusion shall contain the following:

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- a. A summary of the analysis results.
- b. Recommendations to correct any problems or potential problems noted during the analysis.

4. END OF DI-QCIC-80890A